

## ABSTRACT

First, an electrode is formed on an insulation layer that has been formed on a silicon substrate, when manufacturing an infrared detection device. The electrode 5 has a shape matching that of a thermal resistance element constituting the infrared detection device. A semiconductor substrate is placed in a reaction chamber, given a predetermined potential, and heated. Next, a material of a thermal resistor substance constituting the 10 thermal resistance element is vaporized into a gaseous material, and the gaseous material is ion-clusterized and supplied into the reaction chamber. The gaseous material collects toward the electrode as a result of an action of an electric field generated by giving the electrode the 15 predetermined potential. The gaseous material that came into contact with the electrode is stabilized by receiving electrons, and thermally decomposes, thus growing a thermal resistor substance on the electrode.